

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
30 June 2005 (30.06.2005)

PCT

(10) International Publication Number
WO 2005/058758 A1

(51) International Patent Classification⁷: **C01G 39/00**, 41/00, 1/00

(74) Agent: STRAUS, Alexander; Becker, Kurig, Straus, Bavariastr. 7, 80336 München (DE).

(21) International Application Number:
PCT/EP2004/001870

(22) International Filing Date: 25 February 2004 (25.02.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03028188.5 8 December 2003 (08.12.2003) EP

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

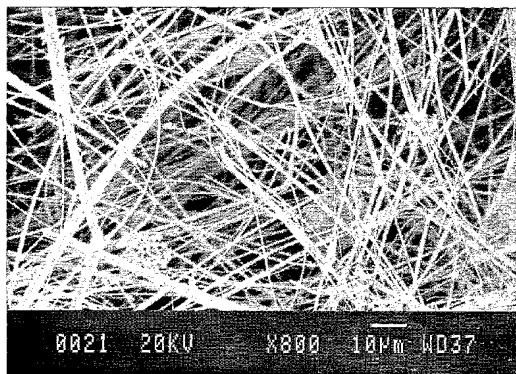
Published:

— with international search report

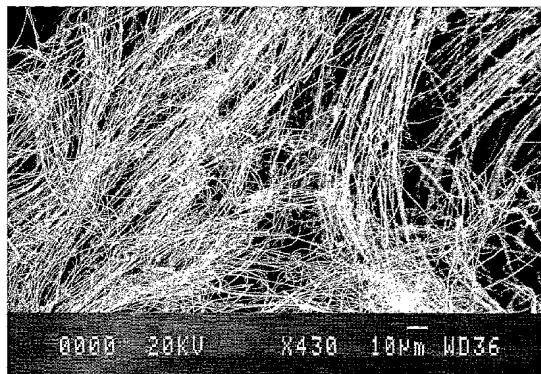
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: QUASI-ONE-DIMENSIONAL POLYMERS BASED ON THE METAL-CHALCOGEN-HALOGEN SYSTEM

a)



b)



WO 2005/058758 A1

(57) Abstract: The present Invention relates a quasi-one-dimensional material with sub-micron cross-section described by the formula $M_6C_yH_z$, where the M = transition metal, C = chalcogen, H = halogen, and where y and z are integers such that $8.2 < y+z < 10$, which materials are synthesized in a Single-step procedure at temperatures above 1000 °C. The present invention also concerns the use of these materials in electronic, chemical, optical or mechanical applications.